

**TESTIMONY BY MR EDWIN HANSEN
MAGNA WATER DISTRICT (UTAH)
ON HR 2265
JULY 21, 2009**

WATER REUSE & GROUNDWATER RECHARGE PLAN

Good Morning. My name is Ed Hansen. I am the General Manager of the Magna Water District, which is comprised of Magna Township, located in the western areas of West Valley City, and a corner of South West Salt Lake City in Salt Lake County, Utah

I want to thank Representatives Chaffetz, Matheson and Bishop for sponsoring this bill on our behalf. All three of there Congressional Districts intersect at our near the area which serves the 28,000 people who reside in our service area.

Through this Title XVI project now before the committee, the Magna Water District has a unique opportunity to restore a drinking water supply by removing arsenic and perchlorate from the Barton Well Field while implementing a water reuse and groundwater recharge project. Over the past century, the historic uses of the nearby land are copper mining and rocket fuel production, both of which has necessitated an aggressive response by our district.

A new electro dialysis reversal (EDR) facility is currently being constructed to remove perchlorate and arsenic from the Barton Well Field resulting in two products: high quality drinking water and a concentrated waste stream.

The drinking water will be pumped directly into the District's potable water system while the waste stream will flow by gravity to the existing wastewater treatment plant (WWTP) site where a bioreactor is being constructed to treat the waste stream.

The bioreactor will produce high quality effluent that can be disinfected and along with the effluent from the existing WWTP and used for irrigation through a reuse and secondary water irrigation system, thus eliminating the need to use high quality drinking water for outdoor irrigation uses.

The existing WWTP effluent is currently discharged into the Great Salt Lake where it is unrecoverable by the District. There is synergy in the proposed system where as the areas being irrigated are also within the recharge zone for groundwater recovery wells that provide water for the District's expanding secondary water irrigation system.

This reclamation project will result in a projected annual reduction of 580 million gallons (1,780 acre-feet) of high quality, potable project water used for outdoor irrigation

Magna Water District is seeking funds, on a matching basis, to implement this project that will generate a several benefits to its water users:

- 1) It will reduce the current use of treated high quality project water thus cutting operating costs,
- 2) It will preserve an 8 cubic feet second (cfs) water right located at the WWTP outfall,
- 3) It will preserve and sustain their valuable water resources, and to promote water conservation.

Utah ranks as the second driest state in the nation following Nevada, but is number one in per capita water use (municipal and industrial) at about 300 gallons of water per person per day. The residents of Magna are willing to invest in a portion of the project that they know will benefit the District as well as other surrounding communities.

In fact, as a part of this reclamation project, the District and its water users have already invested more than \$20 million in treatment facilities to remove arsenic and perchlorate from their water supply.

The high cost of water treatment has forced the District to evaluate water usage and to investigate possibilities for reducing nonpotable water use. In 2004, recognizing the demand for high quality drinking water for outdoor irrigation in their existing system, the District planned, designed and installed the first phase of a secondary water system.

Phase I of this system targets all of the District's large water users such as schools, churches, golf courses, and parks.

As a result of the secondary water system planning and implementation efforts, District reports show a dramatic drop in potable usage for those using the secondary system. Private residences that connected to the secondary water system showed similar results; in most cases, nearly a 98% reduction in potable water usage for outdoor watering was achieved.

The District continues to master plan to address the growing needs of its population by maximizing the use of its potable water supply for domestic, in-home uses and using expansion of the secondary water system for outdoor purposes thereby preserving its valuable potable water resources.

A key element of this Phase II is to utilize the high quality product (reuse) water from the bioreactor at the District's wastewater treatment facility to increase the supply of water available for outdoor use. Reuse of water from the District's bioreactor will control potable water capital and operating costs and enhance water conservation efforts.

In addition, all new development within the District boundary is currently required to install secondary water piping and infrastructure that complies with District standards to further maximizes the District's ability to preserve potable water resources. This policy allows funding for this system to primarily benefit existing users and requires new development to bear the cost of secondary and reuse systems that are to its benefit.

The total cost of the project is estimated to be approximately \$51 million. Project funding sources include approximately \$3 million in Federal funding and \$36 million funded by the District. Passage of this legislation will allow the District to fund the remaining \$12 million through the Bureau of Reclamation's Water Reclamation and Reuse (Title XVI). When this happens, the people of Magna and our larger service area will be able to rely on a sustainable water supply that continues to be clean, safe and dependable. Thank you for this opportunity to testify. I would be happy to answer any questions.